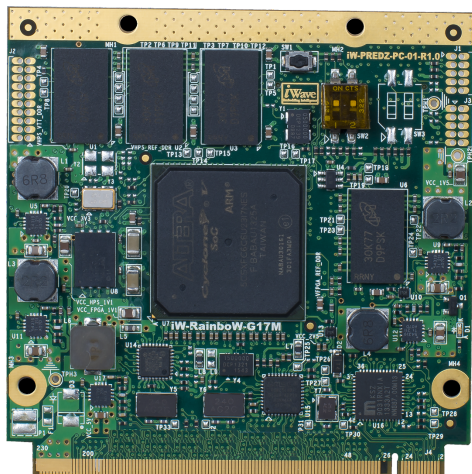


System On Module iW-RainboW-G17M-Q7 Cyclone V SoC Qseven Module



iW-RainboW-G17M-Q7 HIGHLIGHTS

ARM Cortex A9 Dual core CPU integrated with FPGA with up to 110K LEs

Enhanced with integrated transceivers and hard memory controller

Readily available FPGA IP cores for integration

R2.0 Qseven compatible module

iWave Systems launched world's first Altera Cyclone V SX SoC FPGA based Qseven compatible module for the increased system performance requirements. The dual ARM Cortex A9 core with the FPGA allows greater flexibility for the system designers and helps to lower the system cost and power consumption. The improved logic integration with integrated high speed transceivers and hard memory controllers provides increased bandwidth capacity which is ideal for cost-sensitive high end applications.

APPLICATIONS: Industrial Automation, Smart Energy Systems, Video Surveillance, Defense & Aerospace

SPECIFICATIONS

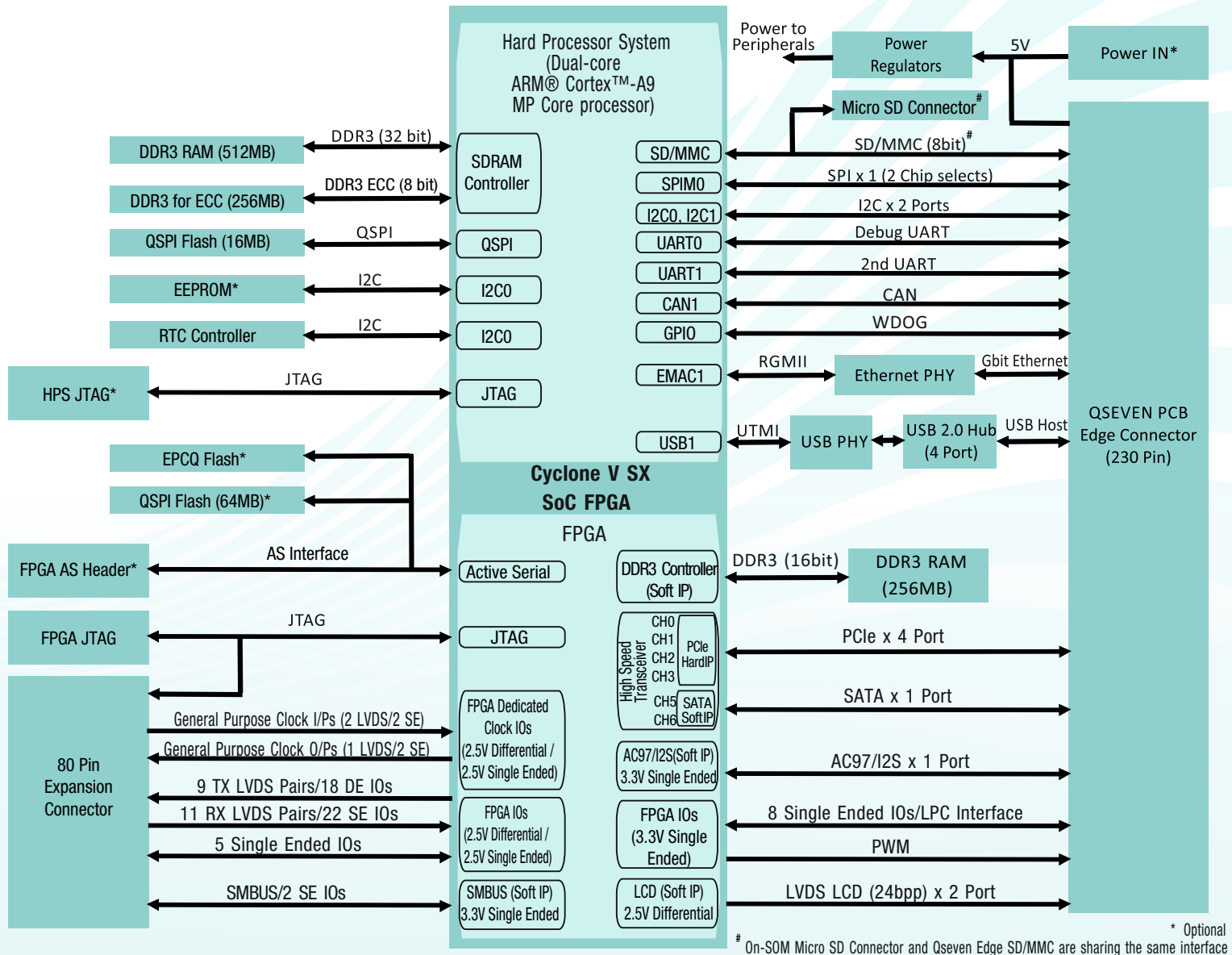
CPU:	Qseven PCB Edge Connector Interfaces:
Altera's Cyclone V SX SoC FPGA	From HPS:
<ul style="list-style-type: none"> Integrated Dual core ARM Cortex-A9 Hard Processor System(HPS) FPGA with upto 110K LEs 	Gigabit Ethernet - 1 Port (On-SOM PHY)
Memory:	USB 2.0 Host - 4 Ports (On-SOM HUB)
512MB DDR3 with ECC for HPS	CAN - 1 Port
16MB QSPI Flash*	SD/MMC (8 bit)*
On-SOM Micro SD Connector #	WD0G - 1 Port
256MB DDR3 for FPGA	I2C - 2 Ports
EPCQ Flash/QSPI Flash for FPGA*	SPI - 1 Port
EEPROM*	Debug UART - 1 Port
On Board Peripherals Support:	2nd UART - 1 Port
JTAG Header for FPGA	Other Control IOs - Through HPS
JTAG Header for HPS*	From FPGA*:
DIP Switch for boot settings	LVDS LCD - 2 Ports (FPGA Soft IP)/23 SE IOs
RTC controller	AC97/I2S Audio (FPGA Soft IP)/5 SE IOs
80 Pin Expansion Connector:	PWM
FPGA IOs (Up to 45 Single Ended IOs - SE IOs)	FPGA IOs - 8 SE IOs
9 TX LVDS Pairs/18 SE IOs	From FPGA High Speed Transceivers*:
11 RX LVDS Pairs/22 SE IOs	PCIe Gen1 x 4 Lane
5 Single Ended IOs	SATA (FPGA Soft IP)
FPGA Dedicated Clock IOs:	Form Factor:
General Purpose Clock Inputs (2 LVDS/2 SE)	70mm x 70mm Qseven Specification 2.0
General Purpose Clock Outputs (1 LVDS/2 SE)	Power Input:
Others:	5V DC
SMBUS/2 SE IOs	Operating Temperature:
FPGA JTAG	-40°C to +85°C Industrial
	Operating System:
	Linux 3.10

* Optional

On-SOM Micro SD Connector and Qseven Edge SD/MMC are sharing the same interface

+ If the FPGA interfaces available in the Qseven edge are not used for Qseven compliance requirement, same interface pins can be used for custom Industrial/networking interface requirements.

CYCLONE V SoC Qseven SOM BLOCK DIAGRAM



OS Support

Linux 3.10

Deliverables

Cyclone V SoC Qseven Module
Board Support Package
User Manual

Optional Kits

iW-RainboW-G7D-Q7
(Generic Qseven Development Kit)

Custom Development

BSP Development/OS Porting
Custom RTL Logic Development
Custom SOM/Carrier Development
Custom Application/GUI Development
Design Review and Support

iWave Systems Technologies, established in 1999, focuses on Product Engineering Services involving Embedded Hardware, Software & FPGA. The company designs and develops cutting edge products and solutions. iWave has been an innovator in the development of highly integrated, high performance, low power and low cost System On Modules and Development Platforms. iWave's expertise has brought out multiple SOMs based on ARM, Freescale, Altera, Intel Atom, Marvell and TI Processors.

iWave Systems has won the confidence of its customers over the years by being a reliable partner in developing innovative products. Our engineers combine outstanding System design experience to deliver Quality Solutions. iWave specializes across Industrial, Automotive and Medical domains. We support our customers by being time efficient, which in turn helps our customers accelerate time to market their products. iWave is a Windows embedded Silver partner and a winner of the Partner Excellence Award.

Note: iWave reserves the right to change these specifications without notice as part of iWave's continuous effort to meet the best of breed specification. The registered trademarks are proprietary of their respective owners.

*Optional items not included in the standard deliverables

Ordering the Cyclone V SoC Qseven SOM

The board can be ordered online from the iWave Website
<http://www.iwavesystems.com/webforms>

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